

IN THE CLAIMS:

The following is a complete listing of the claims in this application, reflects all changes currently being made to the claims, and replaces all earlier versions and all earlier listings of the claims:

Claim 1. and 2. (canceled)

Claim 3. (currently amended): An image pickup apparatus comprising:

a photoelectric conversion area in which a plurality of pixels are two-dimensionally arranged in horizontal and vertical directions, wherein each of said plurality of pixels includes a photoelectric conversion element and an amplification element which amplifies a signal from said photoelectric conversion element to output the amplified signal;

a plurality of first vertical output lines which output sequentially signals from the pixels arranged in the vertical direction;

a plurality of second vertical output lines which output sequentially signals from the pixels arranged in the vertical direction;

a first horizontal output line which outputs sequentially the signals from said plurality of first vertical output lines; ~~and~~

a second horizontal output line which outputs sequentially the signals outputted from said plurality of second vertical output lines,

wherein said first horizontal output line is arranged on a side of a first side of said photoelectric conversion area, said second horizontal output line is arranged on a side

of a second side of said photoelectric conversion area, and said first side and said second side of said photoelectric conversion area are opposite to each other in the vertical direction;

a plurality of first load elements, wherein at least one first load element is arranged to ~~control~~ fix a direction of current flowing through each of said plurality of first vertical output lines; and

a plurality of second load elements, wherein at least one second load element is arranged to ~~control~~ fix a direction of current flowing through each of said plurality of second vertical output lines, and

wherein said plurality of first load elements and said plurality of second load elements are arranged on sides opposite to each other with respect to said photoelectric conversion area.

Claim 4. - 14. (canceled)

Claim 15. (previously presented): An apparatus according to claim 3, wherein said plurality of first vertical output lines and said plurality of second vertical output lines are arranged alternately.

Claim 16. (currently amended): An apparatus according to claim 3, further comprising an addition circuit which adds to each other the signals from a plurality ~~pf~~ of the pixels adjacent to each other.

Claim 17. (previously presented): An apparatus according to claim 3, wherein the amplification element and the first load element construct a source follower, and the amplification element and the second load element construct a source follower circuit.

Claim 18. (previously presented): An apparatus according to claim 3, wherein said plurality of first load elements are arranged between said photoelectric conversion area and said first horizontal output line, and said plurality of second load elements are arranged between said photoelectric conversion area and said second horizontal output line.

Claim 19. (new): A photoelectric conversion apparatus comprising:
a plurality of pixels arranged two-dimensionally, each of said plurality of pixels including a photoelectric conversion element;
amplifying means for amplifying a signal generated in said photoelectric conversion element;
a plurality of first signal lines for reading out signals from said plurality of pixels;
a plurality of output terminals provided to output the signals on said plurality of first signal lines, said plurality of output terminals being arranged on opposite sides of an area in which said plurality of pixels are arranged; and
a plurality of current sources for supplying currents to said plurality of first signal lines, each of said plurality of current sources being a portion of said amplifying means,

and said plurality of current sources being arranged on opposite sides of said area.

Claim 20. (new): An apparatus according to claim 19, wherein said plurality of current sources are arranged on the same sides as those of said plurality of output terminals.

Claim 21. (new): An apparatus according to claim 19, wherein said plurality of current sources are arranged alternately on the opposite sides for every first output line.

Claim 22. (new): An apparatus according to claim 19, wherein said amplifying means is a source follower circuit including a MOS transistor which is arranged so that a gate potential thereof changes in accordance with charges generated in said photoelectric conversion element.

Claim 23. (new): A photoelectric conversion apparatus comprising:
a plurality of pixels arranged two-dimensionally, each of said plurality of pixels including a photoelectric conversion element;
amplifying means provided with a MOS transistor which is arranged so that a gate potential thereof changes in accordance with charges generated in said photoelectric conversion elements, and a source follower circuit including a constant current source;
a plurality of first signal lines for reading out signals from said plurality of pixels; and
a plurality of output terminals provided to output the signals on said

plurality of first signal lines, said plurality of output terminals being arranged on opposite sides of an area in which said plurality of pixels are arranged,

wherein each of said plurality of first signal lines is provided with said constant current source so that a plurality of said constant current sources provided to said plurality of first signal lines, respectively, are arranged on opposite sides of said area.

Claim 24. (new): An apparatus according to claim 23, wherein said plurality of constant current sources are arranged on the same sides as those of said plurality of output terminals.

Claim 25. (new): An apparatus according to claim 23, wherein said plurality of constant current sources are arranged alternately on the opposite sides for every first output line.